Epi Notes

North Carolina Department of Health and Human Services ◆ Division of Public Health
2000-1 June - August 2000

In This Issue:

Back by Popular Demand!

Prepared by Dr. J. Steven Cline, chief, Epidemiology and Communicable Disease Section

The Epidemiology and Communicable Disease Section has recreated the Epi Notes newsletter, last published in 1996. Epi Notes is published quarterly to share timely information regarding important epidemiology issues relevant to North Carolina public health practitioners and other interested people. The current distribution list includes all N.C. local health directors, selected state agencies and a number of healthcare providers in local hospitals and medical offices. In addition, Epi Notes is sent to the other state epidemiologist in other states. ■

Epi Notes Distribution

Prepared by Jessica Collins, office assistant, Section Office

Epi Notes will be sent out on a quarterly basis. We are working to make Epi Notes better than ever, filled with up-to-date information and tips. We are using our old mailing list with known changes to send out this first issue. Addresses and names have changed during the past few years. If your mailing information is incorrect, if you wish to stop receiving the newsletter or if you want to add new names to the list, please contact Jessica Collins at (919) 733-3421 or email **Jessica.Collins@ncmail.net**.
Future issues of Epi Notes will also be posted on the North Carolina epidemiology webpage, **www.schs.state.nc.us/epi**. ■

Cluster of TB Cases Linked to a Homeless Shelter and a Temporary Labor Service

Prepared by Dr. Karen Southwick, medical epidemiologist, General Communicable Disease Control Branch

A cluster of 12 cases of active pulmonary tuberculosis occurred involving a Raleigh homeless shelter and a Raleigh-based temporary labor service. The staff of the Division of Public Health's Tuberculosis Control Program and experts from the Centers for Disease Control and Prevention have been working with the Wake County Human Services Center staff to investigate the outbreak and prevent further spread.

Molecular subtyping of *M. tuberculosis* isolates from the first ten of these cases, using the restriction fragment length polymorphism (RFLP) technique, has shown that eight of the isolates are identical, and all of the isolates are closely related. Epidemiologic evidence gathered to date suggests the index case was most likely a 40-year old homeless man diagnosed with pulmonary TB in December 1998. He probably transmitted the infection to a 37-year old man when the two were working at the same time for a Raleigh temporary labor service company. This second man had been both a long-term

resident of one of Raleigh's homeless shelters and a worker in a Raleigh temporary service company when he was diagnosed with cavitary disease (4.5 cm cavity) in November 1999. Since then, eight more residents of that same shelter have developed active pulmonary TB, with five of those cases in HIV-seropositive men. Another case of active TB developed in an HIV-seropositive man who did not stay at the shelter but who worked at the Raleigh temporary agency during the fall of 1998 and 1999, the same time as the index and second patients. Another homeless man, believed to be a resident of the same shelter, was diagnosed with pulmonary TB in October 1998 and has the same RFLP pattern as the others. The RFLP results of two of the shelter residents with active TB are still pending at the CDC.

"...any skin-testing program should be accompanied by a specific plan or treatment of those who are found to have latent TB infection."

The Wake County Human Services Center has performed tuberculin on site skin-testing (TST) on both employees and residents of the shelter on three different occasions. They have also done testing at the temporary labor service where the patients worked and at a second homeless shelter in Raleigh. To date, 694 individuals have been evaluated for TB, and 128 of those have received chest radiographs. In addition to the cases, skin test results show that 14 other individuals converted their skin tests during the time they were exposed to infectious TB. Twelve were shelter residents, one worked at the temporary labor service, and the last was a shelter resident who worked extensively at the temporary labor service.

It is essential to remember that HIV-infected individuals are more likely than HIV-negative, immunocompetent individuals to develop active TB once they have been infected. Also, any skin-testing program should be accompanied by a specific plan for treatment of those who are found to have latent TB infection. The Wake County Human Services Center and the Raleigh shelter are collaborating to provide a two-month course of directly observed preventive therapy of twice-weekly rifampin and pyrazinamide for shelter residents.

As a result of this outbreak, new health screening procedures are being implemented in the homeless shelters of Wake County. If you would like additional information on the outbreak or the new prevention guidelines please contact Dr. Raoult Ratard, TB Medical Director at (919) 733-0822. ■

Ozone

Prepared by Dr. Ricky Langley, medical epidemiologist, Occupational and Environmental Epidemiology Branch

The North Carolina Department of Health and Human Services (DHHS), Occupational and Environmental Epidemiology Branch (OEE) is concerned about the public health risks to North Carolinians from exposure to environmental ozone concentrations typically seen during the summer months. Two million people live in areas frequently exposed to high smog (or ozone) levels, while over 400,000 people suffer from respiratory problems. Epidemiological studies show that each year, ozone pollution causes over 1,000 visits to hospital emergency rooms in North Carolina alone.

The general population and, in particular, individuals with underlying pulmonary conditions are at risk of developing respiratory problems following prolonged exposure to elevated levels of ozone that may be present during the summer months.

Ozone is a reactive oxidant gas formed in the atmosphere by the chemical reaction of volatile organic compounds (VOCs) and nitrogen oxides (NOx) in the presence of sunlight. It is a major component of smog in the ground-level atmosphere (troposphere). In contrast, the ozone layer in the stratosphere, located approximately 10 km above the earth's surface serves to protect us from exposure to harmful levels of ultraviolet light. Major sources of NOx and VOC emissions are cars, trucks, and coal-fired power plants. In certain regions of the country, especially the Southeast, natural vegetation may also produce substantial amounts of VOCs.

The majority of studies on health effects from ozone have focused on the effects on the pulmonary system. Studies have shown that as the concentration of ozone increases, the effects on the pulmonary system are more pronounced. The various respiratory symptoms reported to occur following ozone exposure include cough, nasal irritation, throat irritation, chest pain with deep inspiration, nausea, shortness of breath, and decreased exercise performance. Objective pulmonary findings from ozone exposure include tachypnea, an increase in airways resistance, and reduction in other measures of pulmonary function such as forced expiratory flow in one second (FEV_1) and in the forced vital capacity (FVC). Ozone also causes increased airways responsiveness and increased sensitivity to allergens. Ambient ozone levels vary from area to area, with the time of day, with the mix of ozone-forming precursor compounds, and with the weather conditions. The

estimated daytime, summer seasonal, 8-hour average background level for ozone for the United States is 0.025 to 0.045 ppm. According to the North Carolina Division of Air Quality (DAQ), ambient ozone levels in North Carolina are usually lowest in the early morning, while peak ozone concentrations occur typically in the early afternoon between 2:00 pm and 6:00 pm EDT during the months of June through August, when temperatures are expected to be the highest. In contrast, along North Carolina mountain slopes and coastal areas, peak ozone concentrations often occur after 7:00 pm and the magnitude of difference between the daily low and high is smaller. In North Carolina, ozone levels tend to be the highest in urban areas such as Charlotte, Raleigh, Durham, Greensboro, Winston-Salem, and Fayetteville. High levels have also been found in the Great Smoky Mountains.

The DAQ forecasts ozone levels for each upcoming day using meteorological and non-meteorological data. The ozone forecast for the next day is issued at 3:00 pm in order to provide sufficient lead time to get the message to the public so that necessary precautions can be taken. The forecast for the next day includes a specific color code which corresponds to a range of ozone concentrations predicted for that day, a US EPA derived Air Quality Index (AQI), and health advice associated with that code (US EPA 1999a). The higher the AQI, the greater the health concern. A list of these codes and summarized health effects and advice associated with each code can be found in the table below.

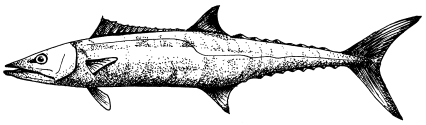
The DAQ forecast can be found on the Internet at http://daq.state.nc.us/Ozone, or by calling 1-888-RU4-NCAIR. General information about ozone can be found at the US EPA web address http://www.epa.gpv/airnow. Health-related information can be found on the Internet at http://www.dhhs.state.nc.us/ozone.htm.

US EPA Color Codes Corresponding to Ground Level Ozone Concentrations (US EPA 1999b with modifications)

AIR QUALITY CATEGORY	OZONE 8-HR (ppm)	AIR QUALITY INDEX (AQI)	COLOR CODE	HEALTH EFFECTS AND ADVICE
GOOD	0.0-0.064	0-50	GREEN	No adverse health effects expected
MODERATE	0.065-0.084	51-100	YELLOW	Unusually sensitive groups -possible cough and painful breathing -consider limiting prolonged outdoor exposure -minimize outdoor exposure 2:00 pm to 6:00 pm
UNHEALTHY FOR SENSITIVE GROUPS	0.085-0.104	101-150	ORANGE	Sensitive groups (i.e., children, adults active outdoors, people with respiratory disease, people unusually susceptible) -possible cough, painful breathing, and decreased lung function -should limit prolonged outdoor exposure -minimize outdoor exposure 2:00 pm to 6:00 pm
UNHEALTHY	0.105-0.124	151-200	RED	Sensitive groups -probable cough, painful breathing, and decreased lung function -avoid prolonged outdoor exposure -minimize outdoor exposure 2:00 pm to 6:00 pm Healthy population -possible cough, painful breathing, and decreased lung function -limit prolonged outdoor exposure -minimize outdoor exposure 2:00 pm to 6:00 pm
VERY UNHEALTHY	0.125	201-300	PURPLE	Sensitive and healthy individuals likely to experience moderate to severe effects like cough, painful and impaired breathing, and decreased lung function Sensitive groups -avoid outdoor activity Healthy population -limit outdoor exertion -avoid outdoor exposure 2:00 pm to 6:00 pm

Four Southeast States Issue Joint King Mackerel Health Advisory

Prepared by Dr. Luanne K. Williams, toxicologist, Occupational and Environmental Epidemiology Branch



North Carolina, South Carolina, Georgia and Florida joined together on March 23, 2000 to issue a joint health fish consumption advisory concerning high levels of mercury in large king mackerel caught in the Atlantic Ocean.

All four states shared data and conducted a joint risk assessment. The findings were clear that large king mackerel contain unhealthy levels of mercury and people should limit their consumption of large king mackerel. The state health officials say that king mackerel under 33 inches fork-length (from nose to where the tail forks) are safe to eat, but king mackerel over 39 inches should not be eaten. People should limit their consumption of 33 to 39 inch fish; women of childbearing age and children age twelve and younger should eat no more than one 8-ounce portion a month and other adults should eat no more than four 8-ounce portions a month. Mercury can damage the brains of unborn babies and young children, this advisory is particularly important for children up to twelve years old and women of childbearing age.

Dr. Williams became concerned with the issue of mercury in large king mackerel in 1998 when she attended a national meeting on mercury problems. At that meeting, officials from the Gulf Coast states discussed their findings in king mackerel from that region. Upon return to NC, Williams and other state officials asked the NC Division of Marine Fisheries (DMF) to sample king mackerel from NC coastal waters. DMF sampled king mackerel from NC waters through 1998-99. A wide range of king mackerel from both commercial and recreational fisheries were collected. The findings were that large king mackerel contained high levels of mercury. The king mackerel population off of North Carolina's coast ranges to Florida. Dr. Williams checked with South Carolina, Georgia and Florida officials and found that their data were consistent with North Carolina's findings.

This advisory is a fish consumption advisory only. It does not prevent fishermen from landing fish larger than 39 inches. The North Carolina Marine Fisheries Commission reports that North Carolina recreational fishermen are allowed three fish per person per day, with a minimum-size limit of 24-inches fork length. Federally permitted commercial fishermen are limited to 3500 pounds per trip with a 24-inch fork length minimum size. The South Atlantic Fishery Management Council is responsible for the management of king mackerel from North Carolina through Florida while the North Carolina Marine Fisheries Commission is responsible for king mackerel in our state waters. These management groups plan to discuss this issue in the near future to determine if additional fisheries regulations are needed.

This is North Carolina's first fish consumption advisory for ocean waters. The state began issuing mercury advisories for inland waters in the early 1990s. Mercury in large, long-lived fish is an international problem. Many states have issued advisories in the past decade. Research continues into the cause of the problem. Because high levels have been found in fish from relatively remote areas, researchers suspect that the mercury, which comes from industrial sources like coal-burning industries, chlorine manufacturing and waste incinerators as well as natural sources, is often spread through the air and deposited in water. Mercury can also come from some mining operations. As bigger fish eat smaller fish, the bigger fish accumulate higher levels of mercury. The longer the big fish's life span, the more likely that it will accumulate mercury. More information about North Carolina's fish consumption advisories is available on the web at http://www.schs.state.nc.us/epi/fish/. ■

Update on Rabies in North Carolina

Prepared by Dr. Stephanie Kordick, public health veterinarian, Occupational and Environmental Epidemiology Branch

The southeastern Atlantic strain of the raccoon rabies epizootic (animal epidemic) first entered northeastern North Carolina in 1990. Since that time it has spread over much of the state, essentially involving all counties. This epizootic now affects all eastern seaboard states from Florida to Maine and extends as far west as Ohio. As of June 2, 2000, only 10 counties in North Carolina (all in the far western part of the state) had yet to report a case of terrestrial rabies (rabies in a land-based animal). However, it should be assumed that rabies is present in all counties of North Carolina, even those which have yet to report a case.

"There have been no diagnosed cases of rabies in the human population in North Carolina since the 1950s... "

Bat rabies remains at enzootic (endemic in animals) levels in North Carolina, as it has throughout the United States for at least the last 30 years.

The number of rabies cases in animals increased steadily from 1990 through 1997 as the raccoon epizootic

expanded throughout North Carolina. By 1998 the number of cases began to subside. However, the number of rabies cases so far this year has increased relative to the same period last year. This year there have been 217 cases of rabies in animals reported as of May 31, compared to 172 reported cases for 1999 through the same period.

It should be mentioned that it is not appropriate to compare the number of rabies cases from one county to another due to variations in size, terrain, animal control policies, etc.

There have been no diagnosed cases of rabies in the human population in North Carolina since the 1950s, when the canine strain of rabies was present in North Carolina. That epizootic was halted through the initiation of canine rabies vaccination laws and increased animal control enforcement measures. These options are not effective in controlling rabies in the wild animal population, although rabies vaccination is still mandatory for dogs (and now cats) as an important part of a public health program aimed at protecting human health through reducing rabies exposure opportunities. ■

Tickborne Diseases in North Carolina

Prepared by Dr. J. Newton MacCormack, head, General Communicable Disease Control Branch

North Carolina is "blessed" with a variety of tickborne diseases, and has ranked #1 in reported incidence among all the states for one of them. The medical and economic importance of ticks has long been recognized due to their ability to transmit disease to humans and animals. Ticks are vectors of a variety of pathogenic agents, including species of bacteria (*Rickettsia rickettsii*, *Ehrlichia ssp.*, *Borrelia burgdorferi*), viruses (tick-borne encephalitis virus-family Flaviviridae), and parasites (*Babesia microti, Anaplasma marginale*).

Seven tick-borne diseases are known to occur among humans in North Carolina: Rocky Mountain spotted fever (RMSF), human monocytic ehrlichiosis (HME), human granulocytic ehrlichiosis (HGE), tularemia, Southern tick associated rash illness (STARI), tick paralysis, and (possibly) Lyme disease. While RMSF and tularemia have long been recognized as causes of human disease in this region, STARI and several forms of human ehrlichiosis have only recently emerged. Alterations in vector-host ecology are at least partly responsible for the emergence of tick-borne diseases. The public health importance of these illnesses will become more significant as human behaviors continue to alter the habitats of tick and reservoir species, resulting in increased transmission of known tick-borne diseases and the emergence of previously unrecognized zoonotic infections in humans.

Rocky Mountain spotted fever: Transmitted by the

American dog tick, this rickettsial disease has been recognized in North Carolina since the 1920s, and we led the nation in reported cases for a number of years. The rash for which the disease is named may not be present, even in fatal cases, and early antibiotic treatment (but *not* before disease onset) is essential to proper clinical management. There were 152 reported cases of RMSF in the state in 1999.

Ehrlichiosis: Both monocytic and granulocytic forms

of this group of rickettsial agent diseases have been documented in North Carolina. It became a reportable disease in our state two years ago. Although disease reports have not caught up with the numbers of cases being reported for RMSF, according to serosurvey results, it is a more common disease here than RMSF. The lone star tick, *Amblyoma americanum*, is the primary vector.

Tularemia and **tick paralysis** are now infrequently

noted in our state. Once called "rabbit fever," tularemia was at one time more commonly associated with wild rabbit contact and, consequently, the rabbit hunting season than with the warm month seasonality of tick-borne diseases. The few cases that still occur here are predominately tick-borne (American dog tick or lone star tick). Tick paralysis is not an infectious disease but is caused by secretion of a neurotoxin by an attached American dog tick into the victim's body. The resulting ascending paralysis (which can be life threatening) usually resolves rapidly upon removal of the tick.

Although **Lyme disease**, transmitted by the deer tick, is the most commonly reported tick-borne disease in the United States as a whole, it is really not common in North Carolina. **Southern tick associated rash illness** (STARI), which is another lone star tick associated illness, mimics some of the early manifestations of Lyme disease and is consequently frequently confused with it. Lyme disease often but not always starts with a distinctive skin lesion that looks like a bullseye at the site of the tick bite. This may be several inches in diameter. Early symptoms of Lyme disease include fever, headache, aching muscles, enlarged lymph nodes, joint pains, fatigue, and malaise. Without treatment the disease later affects one or more of the nervous, musculoskeletal, or cardiovascular systems. Lyme disease vaccine, which was approved for human use in 1998, is recommended only for persons who reside, work or recreate in areas of high risk. Fortunately, all of North Carolina is classified as either a low or no-risk area. ■

SYPHILIS ELIMINATION IN NORTH CAROLINA

Prepared by Evelyn Foust, head, HIV/STD Prevention and Care Branch

Syphilis is a sexually transmitted disease (STD) that causes a significant public health and economic burden in the United States. However, the opportunity exists to end the social and financial toll attributable to this preventable disease. Syphilis can be eliminated. This goal has already been accomplished in several industrialized nations, including Canada, England, Sweden and Denmark. The Centers for Disease Control and Prevention (CDC), Division of STD Prevention has developed a national plan, in partnership with state and local health departments, to eliminate syphilis by 2005. North Carolina is one of the areas in the nation where syphilis is **unacceptably** endemic, and, therefore, must be one of the primary sites in this historic effort.

Background

Since the last national epidemic peak in 1990, when the highest primary and secondary (P&S) syphilis rates in 40 years were recorded, P&S syphilis cases have decreased 85% to 7,221 cases in 1998, the lowest level ever reported. Syphilis is also now extremely concentrated geographically. In 1998, 75% of U.S. counties had already achieved elimination, and more than half of all new syphilis cases were concentrated in only 28 (approximately 1%) of the nation's counties. The overwhelming majority of these high-incidence counties are in the South, including five in North Carolina - Guilford, Mecklenburg, Forsyth, Wake and Robeson counties.

"North Carolina has some of the highest numbers of reported cases of P&S syphilis in the nation..."

Annually, North Carolina has some of the highest numbers of reported cases of P&S syphilis in the nation; in 1998 the state reported 723 new syphilis cases, the most in the nation. The current statewide syphilis epidemic peaked in 1992 with 2,478 cases (36.2 cases per 100,000 persons). Since that peak, syphilis cases have consistently and significantly decreased statewide as a result of public health efforts to prevent new cases. Approximately one-quarter of the state (24 counties) has not had a reported syphilis case since 1997. The success demonstrated in these counties is encouraging and confirms the capability and feasibility of eliminating syphilis throughout North Carolina. In the high-morbidity areas of the state, a priority has been placed on community involvement and rapid outbreak response. The final push for elimination of this disease statewide will require using proven prevention strategies and intensifying current efforts in counties where syphilis continues to be a threat to the community's wellbeing. The goal of syphilis elimination is a disease rate of no more than 0.4 cases per 100,000 persons. The statewide rate for 1998 was 9.6 cases per 100,000.

North Carolina Syphilis Elimination Plan

Goal: Reduce the rate of syphilis infection in North Carolina to no more than 0.4 cases per 100,000 citizens.

Objectives:

1. Increase public awareness of the costs and consequences of syphilis infection.
2. Increase screening and early treatment for STDs.
3. Enhance monitoring and surveillance of syphilis and related STDs to identify potential outbreaks and organize a response.
4. Build community involvement and partnerships to eliminate syphilis statewide.

North Carolina is coordinating syphilis elimination efforts on several levels. The state work group consists of the State Health Director and the Health Directors from the eight highest-morbidity counties. The Division of Public Health team is composed of the section director, the branch chief, the branch special projects and policy manager, the branch epidemiologist, the syphilis elimination coordinator and a prevention specialist from the Centers for Disease Control and Prevention. Health directors from each of the eight counties have appointed a county-wide syphilis elimination coordinator. The county elimination coordinators meet with the state coordinator monthly to discuss progress being made in their counties. The county coordinators are also convening community task forces to create elimination plans unique to their counties.

Specific strategies for syphilis elimination in North Carolina are described below:

Community Assessment

A targeted community assessment is an important aspect of public health program planning, implementation and evaluation. Assessments provide clarity and direction for public health professionals seeking to understand the values, beliefs and attitudes of the communities in which they work. To assist North Carolina's syphilis elimination efforts at the local level, a rapid ethnographic community assessment process (RECAP) will be conducted in each of the eight high syphilis morbidity counties. These assessments will yield a comprehensive description of the local populations at high risk for syphilis, local factors promoting syphilis transmission, and local barriers to and facilitators of syphilis diagnosis, treatment and prevention.

Outreach

Public health outreach is the activity that links services to the community. Street outreach will play an important role in the syphilis elimination strategy. Outreach educators will conduct three types of outreach activities: drop-off sites, fixed sites and active outreach. Drop-off sites, such as housing project commons rooms, are areas where risk-reduction supplies such as condoms and brochures are routinely left for public consumption. Fixed sites, such as jails or motels frequented by prostitutes, are where tables can be set up for screenings and educational presentations. Active outreach means moving down a street in an at-risk neighborhood, going door-to-door delivering risk-reduction information.

Community

Society at large plays an active role in the reduction of infectious diseases. Poverty, inadequate access to health care and lack of education contribute to the prevalence of STDs. In order to change behavior, the community must support prevention messages designed to reduce the risk of infection, e.g., condom use and monogamy.

Jails

The high prevalence of STDs in correctional settings and the lack of routine screening compound the difficulty of reducing syphilis morbidity. Ten percent of arrestees in the 1997 assessment had reactive syphilis tests and one-half were released prior to treatment. Forty-nine percent of those with reactive syphilis tests were never located for treatment, thereby creating an infection risk for their sex partners and the community. Given the high-risk behaviors in which many inmates engage, correctional facilities must play an integral role in syphilis elimination.

RIOT

The Rapid Intervention Outreach Team (RIOT) is a mobile unit that responds to increases in syphilis morbidity. Composed of disease intervention specialists, outreach educators and members of the community, a RIOT is convened at the request of any county needing assistance with a syphilis outbreak. A RIOT differs from the traditional "blitz" in that the community plays an active role in the intervention.

Media

News media outlets inform the community at large by highlighting the problem. Not only is the awareness of the public heightened, but also private providers are made aware that syphilis is a public health emergency.

High-Morbidity Counties

In 1998:

Alamance County: Ranked 49th in the nation. Point of contact is Julie Sweedler, (336) 513-5504.

Durham County: Ranked 30th in the nation. Point of contact is Brian Letourneau, (919) 560-7650.

Forsyth County: Ranked 22nd in the nation. Point of contact is Barbara Carter, (336) 727-8231.

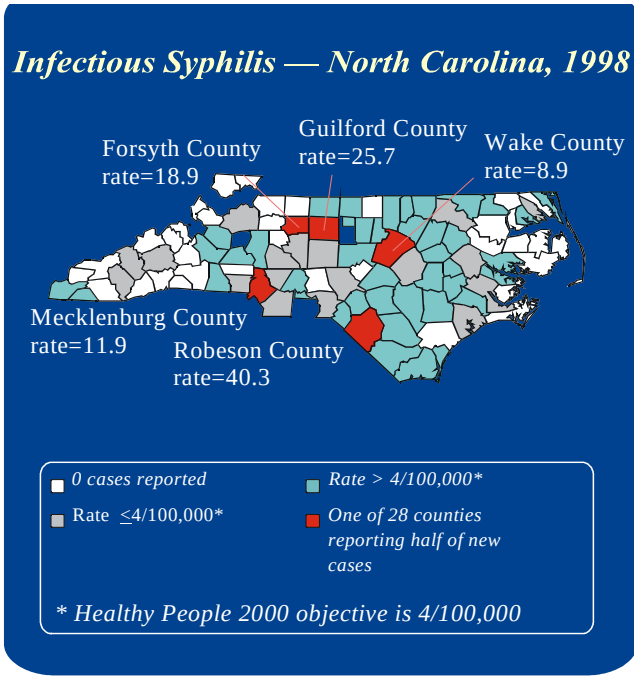
Guilford County: Ranked 13th in the nation. Point of contact is Connie Blumenthal, (336) 373-3136.

Mecklenburg County: Ranked 18th in the nation. Point of contact is Gary Black, (704) 336-3354.

Orange County: Ranked 55th in the nation. Point of contact is Cornelia Ramsey, (919) 732-8181, ext. 2404.

Robeson County: Ranked 28th in the nation. Point of contact is Melissa Packer, (910) 671-3442.

Wake County: Ranked 26th in the nation. Point of contact is Sharon Brown, (919) 212-9371.



For additional information on the Syphilis Elimination project or any of the county activities noted here, please call Evelyn Foust, branch head, HIV/STD at (919) 733-7301. ■

Reported Communicable Diseases, North Carolina, January-June 2000 (by date of report)

Preliminary data, as of 7/5/2000; this table compares surveillance data only for diseases reported in 2000.
Note 1 - Became reportable 8/1/98; **Note 2** - Became reportable 10/1/9; **Note 3** - Became reportable as such 8/1/98; previously within other category ("Encephalitis"; and "Hepatitis, non A-non B"); **Note 4** - Earliest report with HIV infection or AIDS diagnosis; **Note 5** - Primary, secondary and early latent syphilis ■

Disease	Year-to-Date (January-June)			2nd Quarter 2000 (April-June)	Comments / Notes
	2000	1999	Mean (95-99)		
Brucellosis	**1**	0	0	1	
Campylobacter	**215**	253	234	132	
Chlamydia, laboratory reports	**10,481**	11,066	9,160	6,011	
Cryptosporidiosis	**3**	1	-	7	Note 1
Dengue	**1**	0	0	1	
E. coli O157:H7	**6**	21	14	10	Note 2
Ehrlichiosis, Monocytic	**4**	4	-	3	Note 1
Encephalitis, California group	**1**	0	-	0	Note 3
Foodborne, other	**2**	5	24	1	
Foodborne, staphylococcal	**2**	8	9	1	
Gonorrhea	**8,484**	9,426	9,497	4,424	
Hemophilus influenzae	**15**	21	18	9	
Hepatitis A	**89**	63	69	31	
Hepatitis B, acute	**123**	117	135	42	
Hepatitis B, chronic	**278**	381	344	113	
Hepatitis C, acute	**13**	23	-	6	Note 3
HIV/AIDS	**744**	838	947	341	Note 4
Legionellosis	**8**	8	9	5	
Leptospirosis	**1**	1	0	0	
Lyme disease	**9**	32	19	5	
Malaria	**11**	10	9	6	
Meningococcal disease	**30**	26	44	12	
Meningitis, pneumococcal	**29**	34	35	6	
Mumps	**4**	8	10	2	
Rabies, animal	**276**	208	312	170	
Rocky Mountain Spotted Fever	**20**	38	30	82	
Salmonellosis	**337**	434	463	175	
Shigellosis	**59**	113	214	41	
Strepto. A, invasive	**57**	26	-	30	Note 1
Syphilis, total	**583**	645	910	323	Note 5
Tuberculosis	**186**	203	203	132	
Tularemia	**2**	1	1	0	
Vibrio vulnificus	**1**	2	-	1	
Vibrio, other (non-Cholera O1)	**2**	5	-	1	Note 1
Vanco. Resistant Enterococci	**184**	150	-	108	Note 1
Whooping cough	**49**	38	48	21	

Hurricane Preparedness for 2000 Season

Prepared by Dr. J. Newton MacCormack, head, General Communicable Disease Control Branch

The U.S. Weather Service has predicted another "active" hurricane season for 2000, even while much of eastern North Carolina is still licking the wounds inflicted by Hurricane Floyd last year. Although there are many things about natural disasters like hurricanes that are completely unpredictable, a number of steps can be taken to minimize the impact.

The following are a few of the recommendations flowing from analysis of the data gathered in the illness and injury surveillance project conducted after Floyd's visit to NC last September.

- Extra precautions should be taken when driving in flooded areas. Most preventable deaths in the wake of Hurricane Floyd occurred from drowning, particularly when motor vehicles were driven into flooded areas. What may appear to be shallow water in a flooded area is often considerably deeper than appearance suggests.
- People with chronic medical problems should stock up on required medications and supplies before a hurricane. Emergency planners should make sure that communities have access to oxygen, dialysis services, insulin, asthma medications, and other critical medical supplies.
- People working on clean-up and repair in flooded areas should wear protective clothing to avoid skin contact with flood waters, and warnings about the possibility of insect stings need to be emphasized.
- Extra care should be exercised when attempting to rescue dogs and other animals, particularly if the rescuer is unknown to the animal.
- Information should be provided for psychological or stress-related emergency visits on proper referral to experienced counselors.
- Given the common problems of inadequate refrigeration following hurricanes, physicians and other health care providers should follow a standard protocol for diagnostic testing and reporting of diarrhea in these situations. ■

Southern Region Epi Meeting Announcement in October

Prepared by Dr. J. Newton MacCormack, head, General Communicable Disease Control Branch

Each autumn there is a gathering of persons working in epidemiology program areas at the state public health agency level in the Southern states to share experiences in solving mutual problems, hear about new program initiatives, and interact with one or more representatives of the CDC. North Carolina will be hosting this Convocation of Southern State Epidemiologists at the Blockade Runner in Wrightsville Beach this year. The 2½-day meeting will begin on Monday, October 23 and end on October 25. Contact Newt MacCormack at (919) 733-3419 for additional details. ■

Contact Information

Prepared by Jessica Collins, office assistant, Section Office

A. Dennis McBride, MD, MPH,
State Health Director
(919) 733-4392

J. Steven Cline, DDS, MPH, Section Chief,
Epidemiology and Communicable Disease Section
(919) 715-6733

Lisa Abatemarco, Deputy Section Chief
(919) 715-6734

John Newt MacCormack, MD, MPH,
Branch Head,
General Communicable Disease Control
(919) 715-7394

William Tynan, MD, MPH, Branch Head,
Occupational and Environmental Epidemiology
(919) 715-6425

Evelyn Foust, Branch Head,
HIV/STD Prevention and Care
(919) 733-9490

Jessica Collins, Section Office, Epi Notes Contact
(919) 715-6736 ■

State of North Carolina
Division of Public Health
Epidemiology and Communicable Disease Section
www.schs.state.nc.us/epi/

Dr. A. Dennis McBride, State Health Director
Dr. J. Steven Cline, Acting Division Director, Epidemiology Section Chief

Managing Editor, J. Steven Cline
Layout and Typesetting, Jessica Collins

Epidemiology and Communicable Disease Section Office	(919) 733-3421
Occupational and Environmental Epidemiology Branch	(919) 733-3410
Rabies Emergency Number-Nights, Weekends, Holidays	**(919) 733-3419**
General Communicable Disease Control Branch	(919) 733-3419
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